OCE-M-74-267

7 MAY 1974

MEMORANDUM FOR: Chairman, OC Executive Board

SUBJECT   :   Voice Communication Plan

REFERENCE   :   OCE-M-74-049, dtd 1 February 1974

    1.   During the presentation of the Voice Communications
Plan to the OC Executive Board on 6 December 1973 several
significant questions were asked by the Board.   The
referenced memorandum addressed those questions and pro-
vided answers to all but two of them.   Answers to those two
questions have been obtained and are provided in this memo-
randum.

    a.   Obtain customer validation of requirements.

      The Communications Requirements Working Group,
which is composed of representatives from each of the
Directorates, has collected data from essentially all
Agency offices and staffs.   This information has been
compiled and evaluated by the OC-E/Staff Engineering
Division and the results coordinated with the OC-O/
Staff Operations Division.   The study shows that the
present secure voice systems are not meeting the needs
of a large portion of Agency users, particularly in
several of the out buildings.   It further revealed

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system.   A summary of the study results and findings
is included as Attachment A.

    b.   Determine the suitability of the Red Button
system to meet the secure voice objective.

      As a result of a memorandum sent to the Director
of Security requesting that OS determine what can be
done to the Red Button system to make it suitable for
Top Secret/Codeword operational traffic, the Technical

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Security Division conducted a suitability study of that system. Comments provided by the Office of Security on the general security and suitability aspects of the Red Button system are contained in their 28 February memorandum which is included as Attachment B. It was pointed out in their memorandum that the Red Button system would cause serious problems if it were to be used as the basis of the Headquarters comprehensive secure voice system proposed in the Voice Communications Plan. Not only would there be possible problems in personnel security with [   ] maintenance and limited expansion capacity but the largest problem would be in satisfying the physical and technical security requirements.
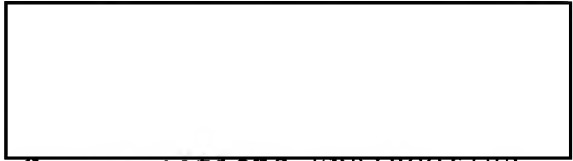
The existing Red Button system is not installed according to the required security design and, to upgrade the classification level and interconnect it to the NSA system, the initial installation compromises would have to be fully corrected. This, in essence, means that the entire system would have to be removed and reinstalled in a conduit system with the proper physical protection provided identical to the existing Gray system. Due to the problems and costs that would be encountered in attempting to properly secure the Red Button system, the Office of Security does not recommend consideration of that system as an economical and viable starting point for the comprehensive secure voice system at Headquarters.

2. Proposals for the Tandem (Trunk) Switch and Operator Console(s) have been received from four bidders. It is antici-pated that a source will be selected by 15 May and a contract awarded by 15 June. Personnel of the Procurement Division, OL are undertaking the evaluation required by Office of Management and Budget Circular No. A-76, "Policies for Acquiring Commercial or Industrial Products and Services for Government Use." In the event that the decision is made to purchase, rather than lease, the Tandem Switch and Operator Console(s) the evaluation apparently will require the signature of the Deputy Director for Management and Services or possibly the Director.

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3. To assist in the long-term cost and technical evaluations of the proposals now under review, and to permit the continued orderly pursuit of the Voice Communications Plan, it is recommended that approval in principle be given by the Board to proceed with planning for the Headquarters PABX. Actual procurement would be dependent on the availability of funds.

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Chief, Communications Engineering

Attachments: (2)
  A. Voice Communications Requirements Summary
  B. OS Memorandum, dtd 28 Feb. 1974, Security of the
        Headquarters Red Button System

Distribution:
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SECURE VOICE REQUIREMENTS STUDY

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Prepared by [   ]
OC-E/SED/Systems Design Branch,
in coordination with Mr. [   ]
[   ], OC-[   ] Telephone Data
and Voice Branch

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SUMMARY

1. The presently available secure voice equipment, i.e., instruments and lines, are insufficient as they meet the needs of only three-fourths of the users. The coverage provided by these systems is inadequate for approximately one-half of the users primarily due to the lack of interconnectability of all of the various systems. These inadequacies are substantially greater at several of the out buildings. Every Directorate advised they anticipate expanded demand for secure voice capability to other Agency buildings, other Government agencies and, in several instances, to locations throughout the country. (Note: Insufficient information has been gathered at this time to make comprehensive judgements on the needs for overseas secure voice systems.)

2. This study further shows that while the Headquarters "Red Button" system is totally adequate in terms of instruments and lines, well over fifty percent of its users need a system suitable for discussion of "Top Secret," "Codeword" and/or sensitive operational information.

3. With respect to the special features, i.e., conferencing, call transfer, camp-on busy, executive override, etc., which should be incorporated in the design of future secure voice systems, the users expressed the greatest interest in a conferencing capability. The study further showed that future secure voice systems should be designed to allow for both direct dial and secretarial answering capabilities.

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28 FEB 1974

MEMORANDUM FOR: Director of Communications

SUBJECT   :   Security of the Headquarters
                     Red Button System

REFERENCE   :   OCM 74-061, 30 January 1974,
                     Same Subject

    1.   The Technical Security Division (TSD),
Office of Security, has reviewed the Office of
Communication's Voice Communications Plan as re-
quested by the reference memorandum. It was asked
to comment on the feasibility of upgrading the
present "Red Button" system in the Headquarters
building to Top Secret/Codeword so that the system
could be incorporated into the non-encrypted por-
tion of the Plan as a possible cost saving measure.
Although the Office of Security neither has access
to all the necessary data for a comparative cost
analysis, nor was requested to do so, it can com-
ment on general security and suitability aspects
of the Red Button system as requested. Such com-
ments are included in the attached study.

    2.   It is not recommended, based on the TSD
study and what is currently known of the objectives
and design of the Voice Communication Plan, to con-
sider Red Button system upgrading and incorporation
as a viable and economical starting point for the
interbuilding system at Headquarters. The study
shows the Red Button system to have serious prob-
lems in the following areas:

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    a.   Personnel security problems based
on [   ] and maintenance of
this system.

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   b. Traffic capacity problems because
       the existing system is so much
       smaller than what is required to
       meet the design objectives.

   c. Physical and technical security
       problems because the system was
       not installed according to the
       intended secure design due to
       economic and space considerations
       at the time of construction.
       Because Gray line and other se-
       cure systems will be combined in
       this internal network and because
       the classification of the system
       is being upgraded, these initial
       design compromises would have to
       be fully corrected which dictates
       an all encompassing and therefore
       probably uneconomical rework of
       the entire system.

   3. This Office is pleased to support the efforts
of the Office of Communications in providing expanded
and integrated secure voice communications for the
Washington area Headquarters complex, because the
existing telephone system has long been recognized
as a problem which would require extensive coordinated
effort to correct. The Technical Security Division
would appreciate being kept informed of progress in
the implementation of the Plan. An appropriate con-
tact would be Mr.

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                                    Director of Security

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